

REMARKS

Claims 1-7, 12-38, 69-73, and 81-93 were previously pending in the subject application. The Examiner has rejected claims 86-89 and has withdrawn claims 1, 22-38, 69-73, 83-85, and 90-93 from further consideration. The Examiner has allowed claims 2-7, 12-21, and 81-82. Applicant has amended claim 86 and has added claim 94. Applicant has also cancelled claims 1, 22-38, 69-73, and 83-85, without prejudice or disclaimer of the subject matter contained therein. Accordingly, claims 2-7, 12-21, 81-82, 86-89, and 90-94 are now pending in the subject application. Support for the amendments can be found at, for example, paragraph nos. 91 and 113-115 and FIGs. 13-15. No new matter has been added to the subject application.

Applicant will sequentially address various issues raised by the Examiner.

Election/Restrictions

The Examiner has withdrawn claims 1, 22-38, 69-73, 83-85, and 90-93 from further consideration as being drawn to a non-elected invention. In an effort to expedite the prosecution of the subject application, Applicant has cancelled claims 1, 22-38, 69-73, and 83-85, without prejudice or disclaimer of the subject matter contained therein. Applicant reserves the right to pursue any cancelled subject matter in one or more continuing patent applications. However, Applicant has retained claims 90-93, which depend from claim 86. Upon indication of allowance of claim 86, Applicant respectfully requests that the Examiner withdraw the restriction requirement for claims 90-93 and consider those claims in the subject application.

Claim Rejection under 35 U.S.C. §103

The Examiner has rejected claims 86-89 under 35 U.S.C. §103(a) as being unpatentable over Schneider et al. (WO 01/09181) in view of Thomas et al. (J. Phys. D: Appl. Phys. 31:253-266, 1998). Applicant respectfully traverses the rejection of claims 86-89. Nonetheless, in an effort to expedite the prosecution of the subject application, Applicant has amended claim 86 to more fully distinguish over the cited references.

Claim 86 includes a number of features that are not taught or suggested by the cited references, taken either alone or in combination. For example, Applicant's review of the cited

references has failed to identify any teaching directed to an actuator as recited in claim 86, which actuator comprises “a movable member,” “a first biological material positioned on at least a portion of the movable member,” “a reservoir defining two orifices that are configured to slidingly engage opposite ends of the movable member,” “a second biological material positioned within the reservoir so as to interact with the first biological material,” wherein, “when the second biological material is sufficiently energized, an interaction of the first and second biological materials is such that the movable member is moved substantially linearly in a direction towards one of the orifices.”

Schneider et al. discloses a molecular motor in which concentric cylinders or nested cones rotate around a common longitudinal axis. *See Abstract.* For instance, with respect to FIG. 1, this cited reference discloses that, “[i]n operation, a solution that contains an effective concentration of ATP is introduced into *the flow space 42 between cylinders 12, 14, and* allowed to flow through the cylinders *along their entire length.*” Page 17, lines 24-26 (emphasis added). Nowhere does Schneider et al. teach or suggest an actuator that comprises “a reservoir defining two orifices that are configured to slidingly engage opposite ends of the movable member.” Moreover, nowhere does this cited reference teach or suggest such an actuator wherein, “when the second biological material is sufficiently energized, an interaction of the first and second biological materials is such that the movable member is moved substantially linearly in a direction towards one of the orifices.” These deficiencies of Schneider et al. are not remedied by the teachings of Thomas et al.

At least in view of the foregoing reasons, Applicant respectfully submits that claim 86 defines subject matter that is not taught or suggested by the cited references. Therefore, Applicant submits that claim 86 and its dependent claims 87-89 and 94 are in a condition for allowance.

With respect to newly added claim 94, the cited references fail to teach or suggest that “the two orifices are configured to slidingly engage the opposite ends of the movable member so as to seal a liquid that is positioned within the reservoir.”

Allowable Subject Matter

The Examiner has allowed claims 2-7, 12-21 and 81-82. Applicant respectfully submits that these claims remain allowable.

In sum, Applicant respectfully submits that all of the claims of the subject application are now in a condition for allowance, which is respectfully solicited. If the Examiner believes that any of the claims are not in a condition for allowance, the Examiner is encouraged to contact the undersigned to resolve any outstanding issues.

Dated: August 22, 2005

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